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Region's History With 1-Hour Ozone Standard

- 1990 - Area classified as a “marginal” nonattainment area pursuant to CAA amendments.
 - Nonattainment area included only Vanderburgh County
- 1994 - Area Redesignated to Attainment (Classified as a Maintenance Area)
 - Maintenance plan in place to ensure no backsliding.
- 1994 -2002 Area continues to attain the 1-hour standard.

Overview of the Eight-Hour Ozone Standard

- July 17, 1997 - U.S. EPA announced new stricter national ambient air quality standards (NAAQS) for ground-level ozone.
- May 1999 new standards challenged in court.
- Spring 2000 - U.S. EPA released guidance concerning the designation process. States were encouraged to provide recommendations to U.S. EPA by June 30, 2000.
- June 30, 2000 - Indiana's original 8-hour nonattainment assessment was submitted to U.S. EPA.
- February 27, 2001 – U.S. Supreme Court upholds 8-hour ozone standard after designations delayed due to legal challenges.
- November 14, 2002 - U.S. EPA issues memorandum stating that designations will be final by April 2004. States are asked to submit recommendations by April 15, 2003.
- February 27, 2003 - U.S. EPA issues memorandum granting states until July 15, 2003 to submit recommendations.



Overview of the Eight-Hour Ozone Standard

Layout of U.S. EPA's Proposed Process for Designations

November 14, 2002 U.S. EPA memorandum outlines the schedule for designating areas under the 8-hour ozone (O₃) standard.

- Consistent with Section 107 of the Clean Air Act, U.S. EPA is requesting States to provide designation recommendations to the Regional Administrator by July 15, 2003.
- 2000-2002 monitoring data should be used for devising recommendations. However, U.S. EPA will use the 2001-2003 data for promulgating final designations if the data are available and quality assured.
- Also per Section 107 of the Clean Air Act, if U.S. EPA intends to modify recommendations made by the Governor, the Administrator must notify the State and provide an opportunity to demonstrate why any proposed modification is inappropriate. Such notification must be given no later than 120 days prior to promulgation of designations.
- Designations will be final by April 15, 2004.



Overview of the Eight-Hour Ozone Standard

State Implementation Plan and Attainment Deadlines

- ❑ States will have until 2007 (three years from the date of designation) to submit State Implementation Plans (SIPs) to U.S. EPA. A SIP outlines the control strategies and technical information to demonstrate how and when the area will achieve attainment of the standard.
- ❑ Attainment dates will likely be established based on nonattainment classifications (marginal, moderate, serious, severe, extreme). In Indiana, the attainment dates will likely range from 2007 to 2013.
- ❑ U.S. EPA expects to propose rules in Spring 2003 concerning ozone nonattainment classifications, attainment dates, and any mandatory ozone control measures.



U.S. EPA 8-Hour Schedule

April 2003	Publish proposed implementation rule
July 2003	States provide designation recommendations
Late 2003	Publish final implementation rule
April 2004	EPA signs final nonattainment designations (effective shortly after*)
April-May 2007	Nonattainment area SIPs submitted to EPA (3 years from effective date)
2007-2021	Range of attainment dates

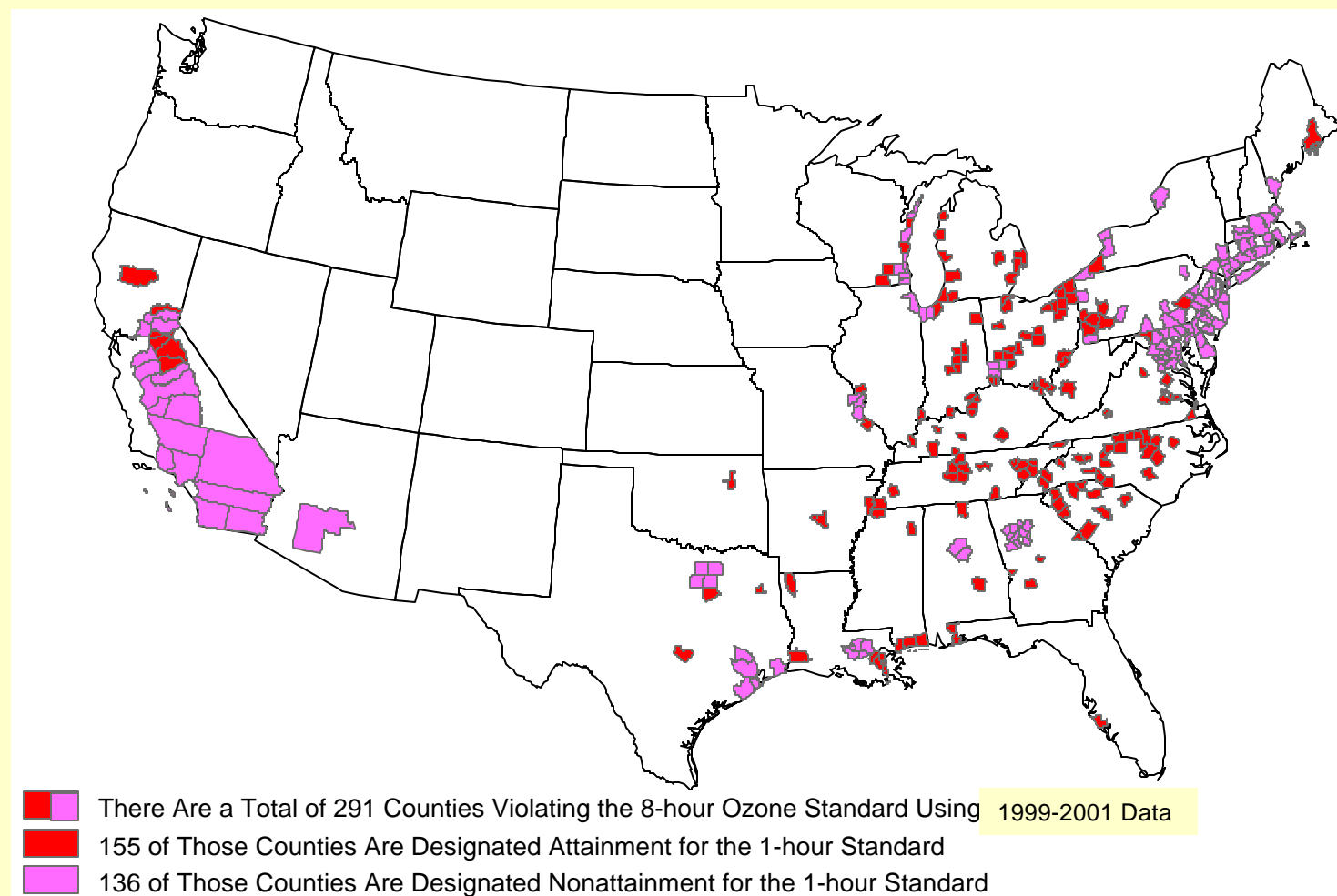
Harmonization of 8-hr Ozone and PM2.5

- ❑ End of 2003—Finalize O3 NAAQS implementation rule
- ❑ 2003-2004--propose and finalize PM2.5 implementation rule
- ❑ 2004 --Designate nonattainment and attainment areas under 8-hr ozone standard (after receiving recommendations from states). *Note: The statutory deadline for 8-hour ozone designations has passed, and EPA has negotiated settlement agreement on designations.*
- ❑ 2004--Designate nonattainment and attainment areas under PM2.5 standard (after receiving recommendations from states)
- ❑ 2007--States submit plans for implementing ozone and PM2.5 NAAQS (including state rules for emission reductions)

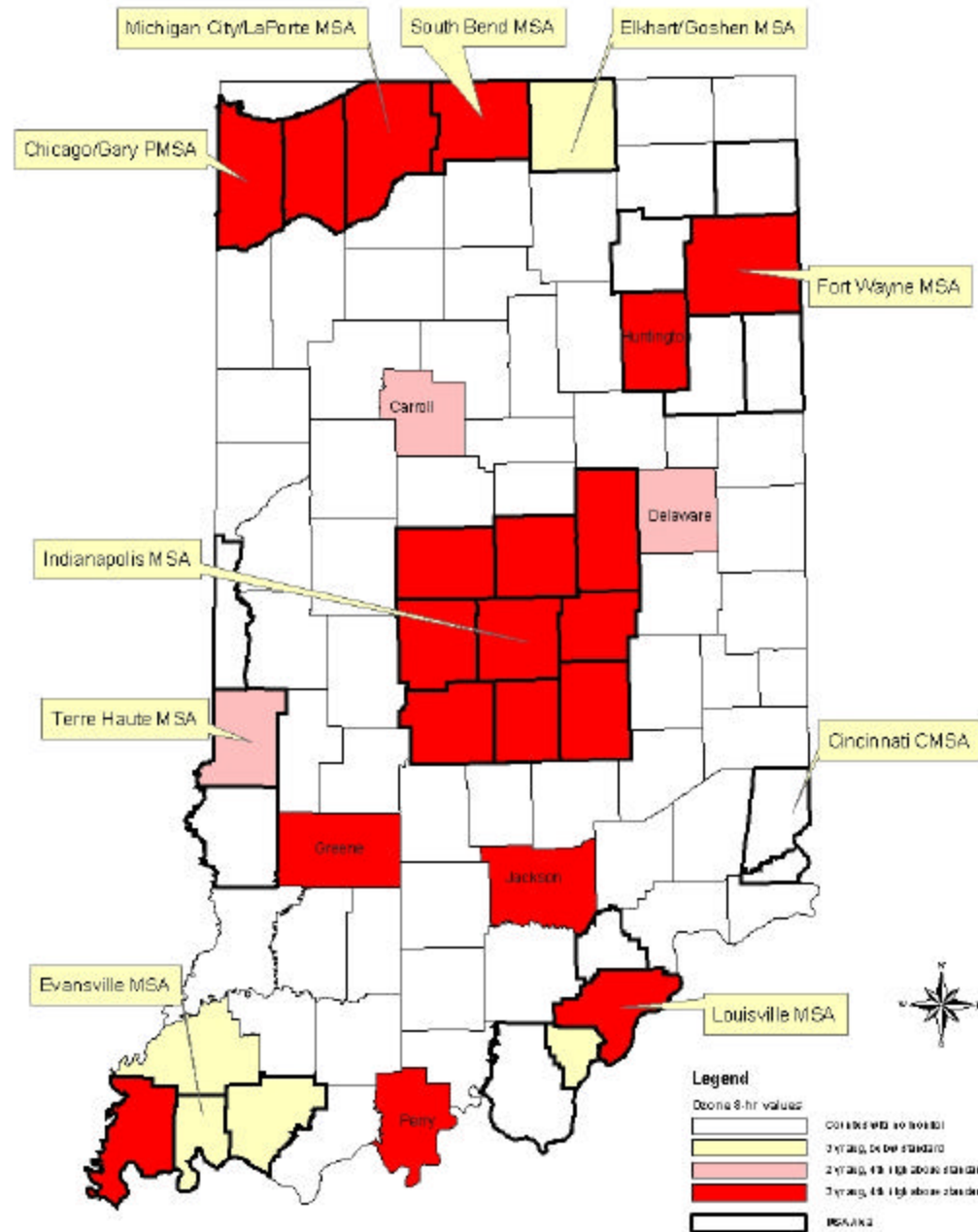


Counties violating the 8-hr ozone NAAQS

1999-2001



Indiana MSA Boundaries and Counties with O3 Monitors



Indiana Designation Recommendations

Outreach

- Information available through our website, and questions and comments can be shared via an on-line forum. (<http://www.in.gov/ideM/air/8hourstandard/index.html>)
- Mailing to interested and affected parties in each of the affected areas.
- Presentations/solicitation of comment through public meetings.

Information to be Used in Assessment Process (Per U.S. EPA Guidance)

Primary

- Monitoring data
- MSA Boundaries

Secondary

- Emissions trends
- Traffic and employment patterns
- Population growth
- Commercial, residential, and industrial growth
- Meteorology



Regional Monitoring Data (2000-2002)

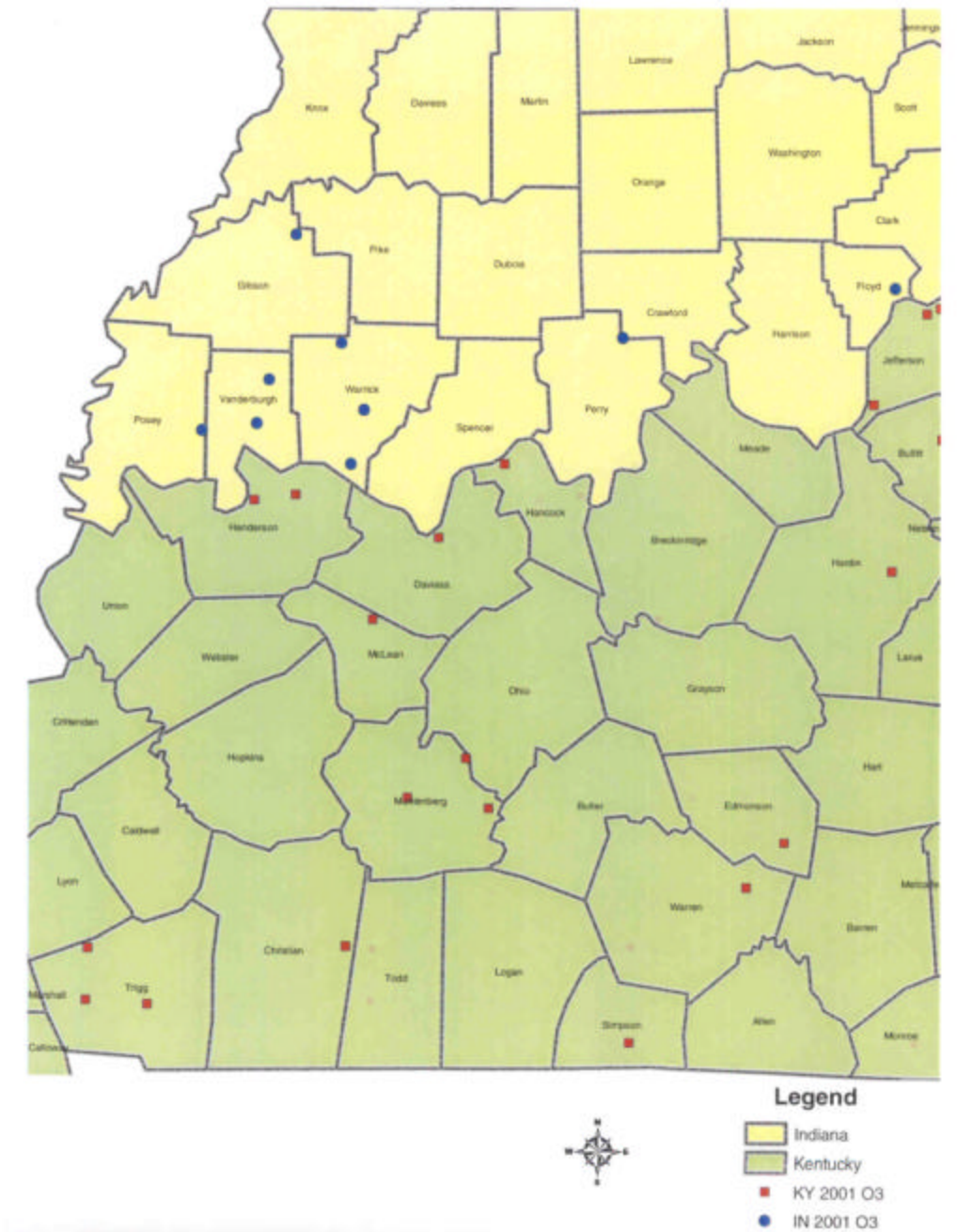
Evansville MSA & Gibson County

<u>County</u>	<u>Location</u>	<u>3yr Avg. 4th High</u>
Posey	St. Phillips	0.087
Vanderburgh	Evansville(Mill Rd.)	0.083
Vanderburgh	Scott School	0.077
Warrick	Alcoa	0.084
Warrick	Boonville H.S.	0.080
Warrick	Tecumseh H.S.	0.080
Gibson	Toyota	0.067*

*Based on 1999-2001 Monitoring Data from source operated monitor. 2002 data not yet available.



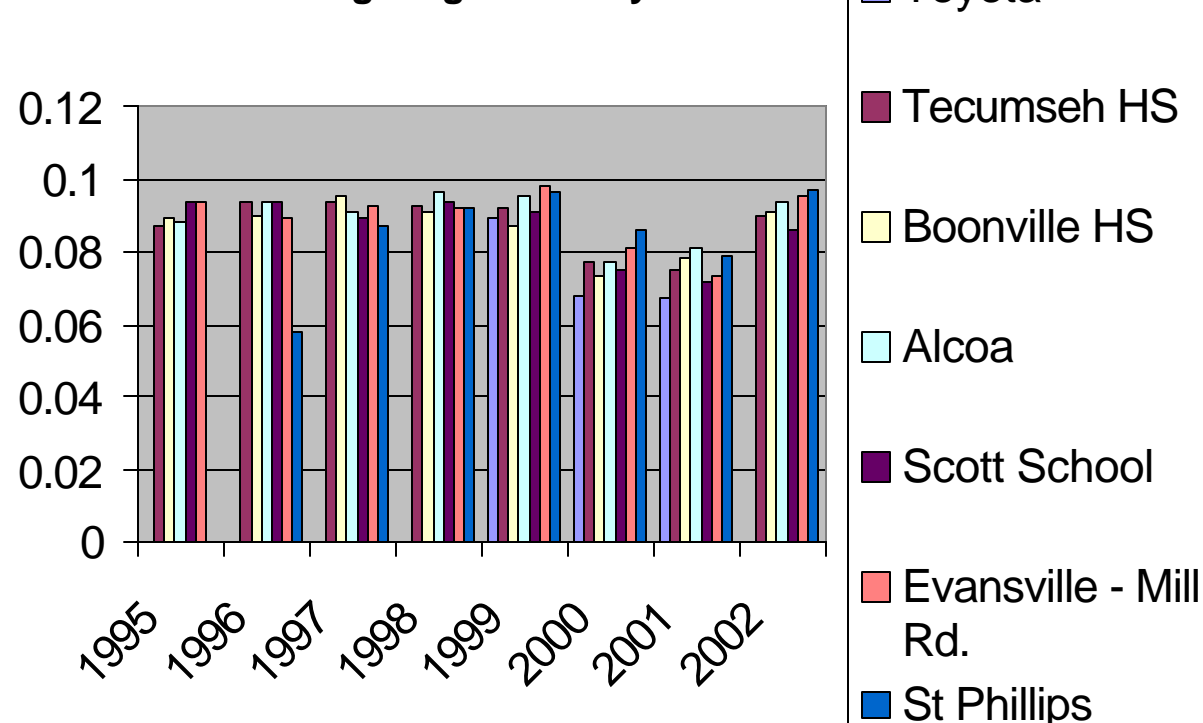
2001 SW Indiana/NW Kentucky Ozone Monitor Network



Annual 4th High By Monitor Site Evansville MSA & Gibson County

	Toyota	Tecumseh HS	Boonville HS	Alcoa	Scott School	Evansville - Mill Rd.	St Phillips
1995		0.087	0.089	0.088	0.094	0.094	
1996		0.094	0.09	0.094	0.094	0.089	0.058
1997		0.094	0.095	0.091	0.089	0.093	0.087
1998		0.093	0.091	0.096	0.094	0.092	0.092
1999	0.089	0.092	0.087	0.095	0.091	0.098	0.096
2000	0.068	0.077	0.073	0.077	0.075	0.081	0.086
2001	0.067	0.075	0.078	0.081	0.072	0.073	0.079
2002		0.09	0.091	0.094	0.086	0.095	0.097

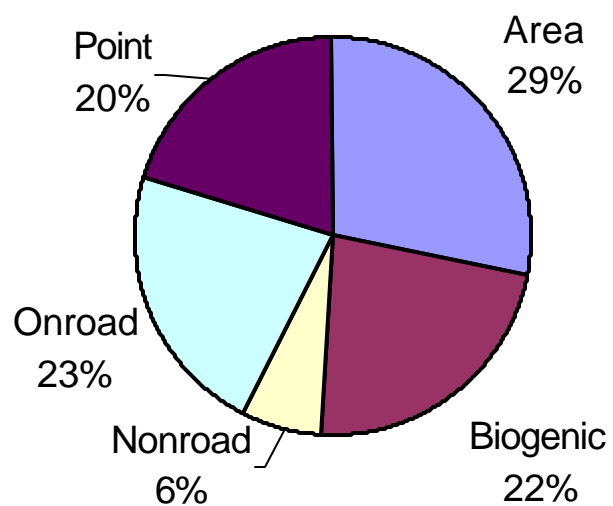
Annual 4th Average High Value by Site



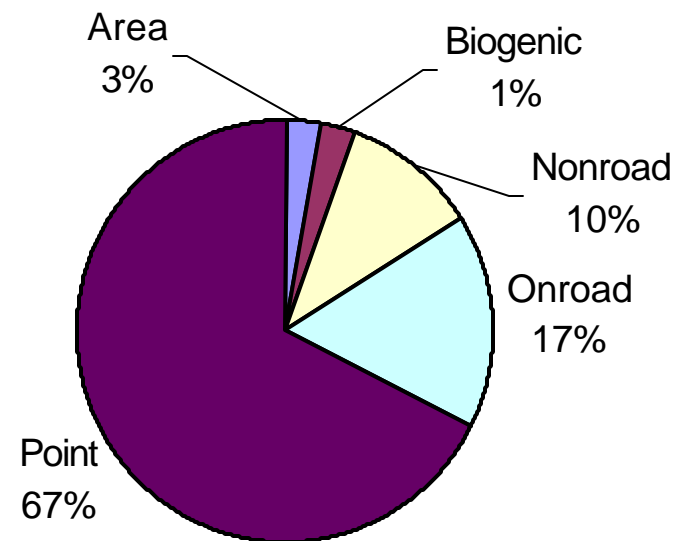
Emissions by Source Category

Evansville MSA

1996 VOC



1996 NOx

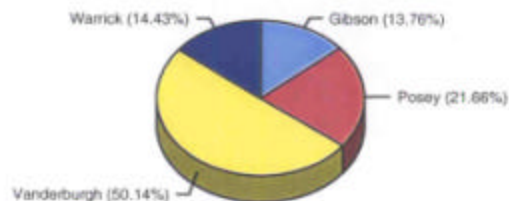


Total Emissions by County (MSA & Gibson County)

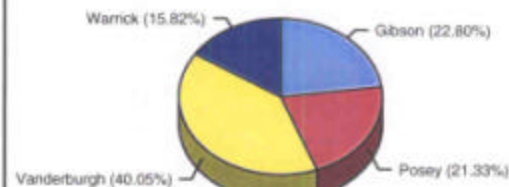
(1996 Actual Vs. 2007 Projected)

	1996 VOC	% Of MSA	2007 VOC	% of MSA	1996 NOx	% of MSA	2007 NOx	% of MSA
Gibson	3,731	14%	5,149	23%	47,496	46%	9,640	24%
Posey	5,871	22%	4,816	21%	12,507	12%	7,852	20%
Vanderburgh	13,592	50%	9,045	40%	8,239	8%	7,021	17%
Warrick	3,911	14%	3,574	16%	35,395	34%	15,671	39%
	27,105	100%	22,584	100%	103,637	100%	40,184	100%

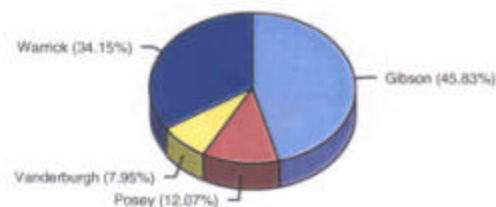
1996 VOC



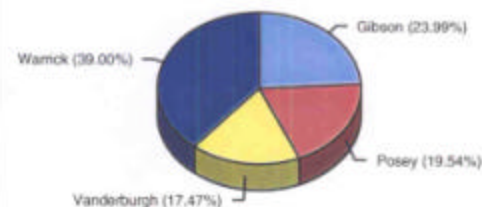
2007 VOC



1996 NOx

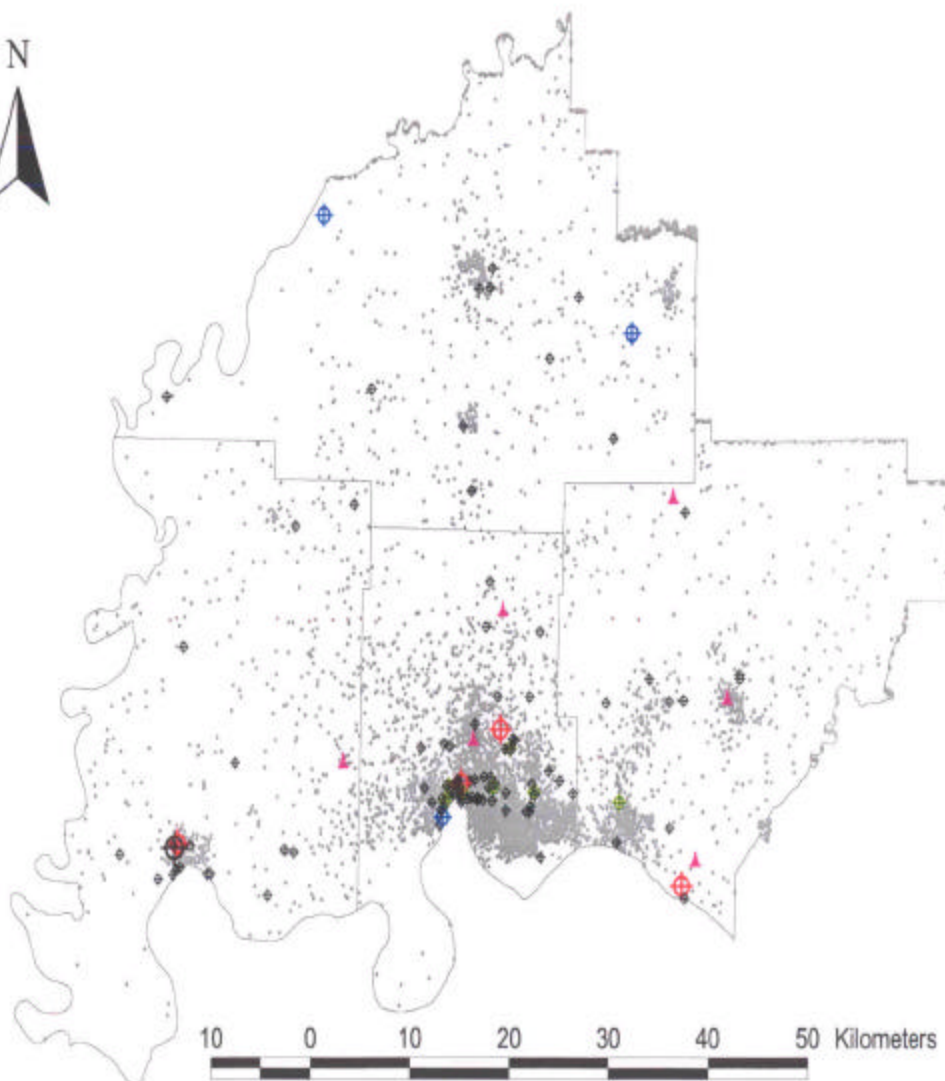


2007 NOx



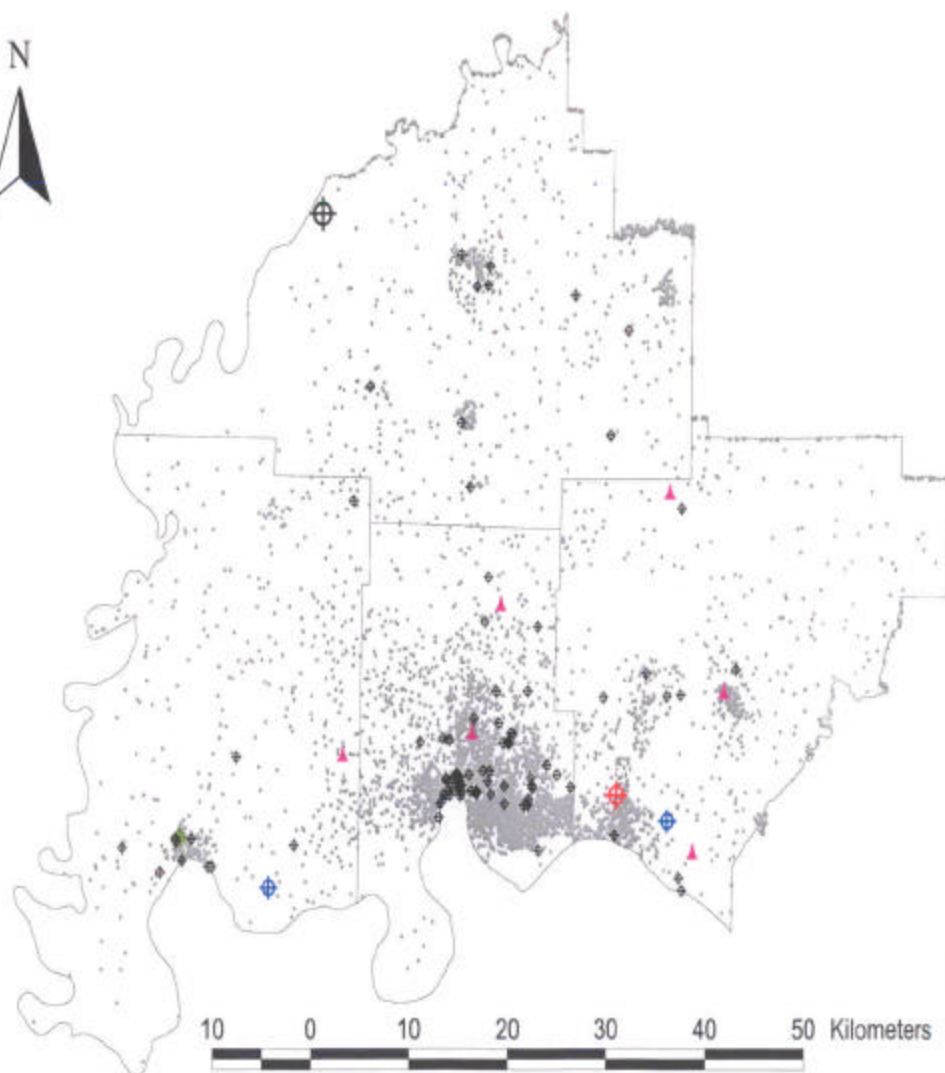
Evansville MSA Population VOC Emitters

- ▲ EvansMSA Ozone Monitors
- Evansville MSA VOC Sources
 - ◆ 0 - 40,844
 - ◆ 40,844 - 127,189
 - ◆ 127,189 - 369,372
 - ◆ 369,372 - 1152,103
 - ◆ 1152,103 - 2021,879
- Population Distribution (1990)
 - 1 Dot = 50



Evansville MSA Population NOx Emitters

- ▲ EvansMSA Ozone Monitors
- Evansville MSA NOx Sources
 - ◆ 0 - 332,454
 - 332,454 - 3204,095
 - ⊕ 3204,095 - 9028,745
 - ⊕ 9028,745 - 23827,53
 - ⊕ 23827,53 - 44692,29
- Population Distribution (1990)
 - 1 Dot = 50



Population Growth

Evansville MSA & Gibson County

	1990	1997	# Change	% Change	2000	# Change	% Change	2020	# Change	% Change
Gibson	31,913	31,948	35	0%	32,313	365	1%	33,197	1,249	4%
Posey	25,968	26,640	672	3%	27,438	798	3%	29,372	2,732	10%
Vanderburgh	165,058	166,837	1,779	1%	168,464	1,627	1%	172,403	5,566	3%
Warrick	44,920	50,831	5,911	13%	53,822	2,991	6%	61,067	10,236	20%

Evansville MSA Population and Road Data

Daily Vehicle Miles Peak

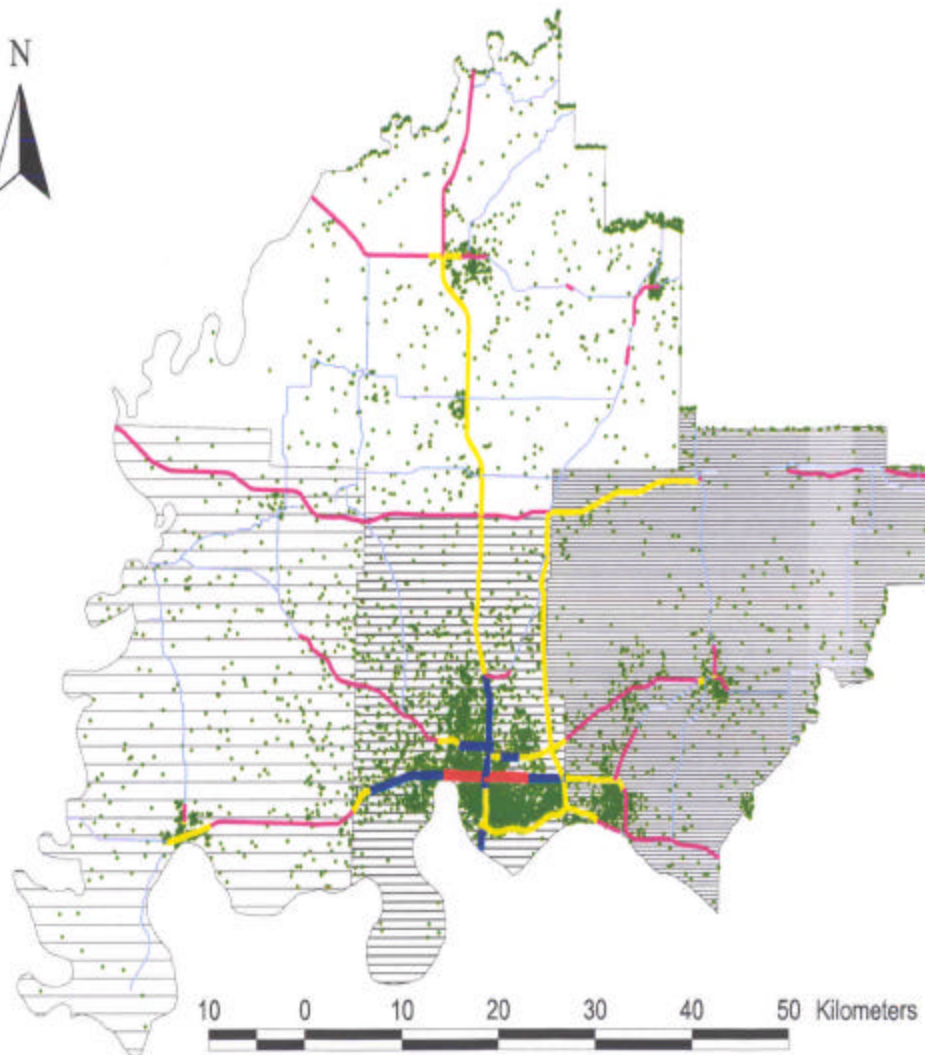
- 10 - 309
- 310 - 675
- 676 - 1177
- 1178 - 2046
- 2047 - 3217

Population Distribution (1990)

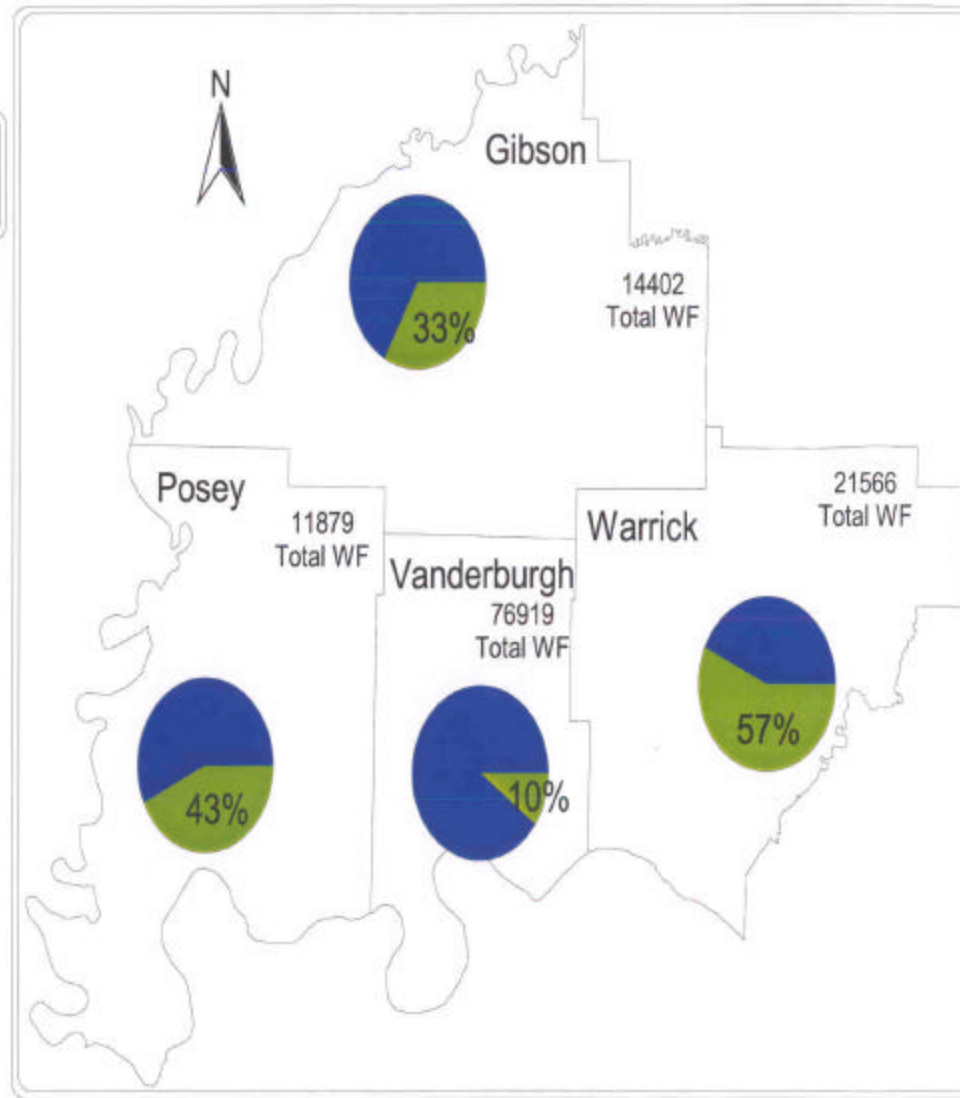
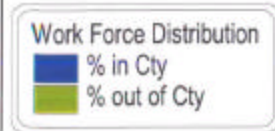
1 Dot = 50

1997 - 2020 Population Change

- 1249 - 2500
- 2500.1 - 5000
- 5000.1 - 8000
- 8000.1 - 10250

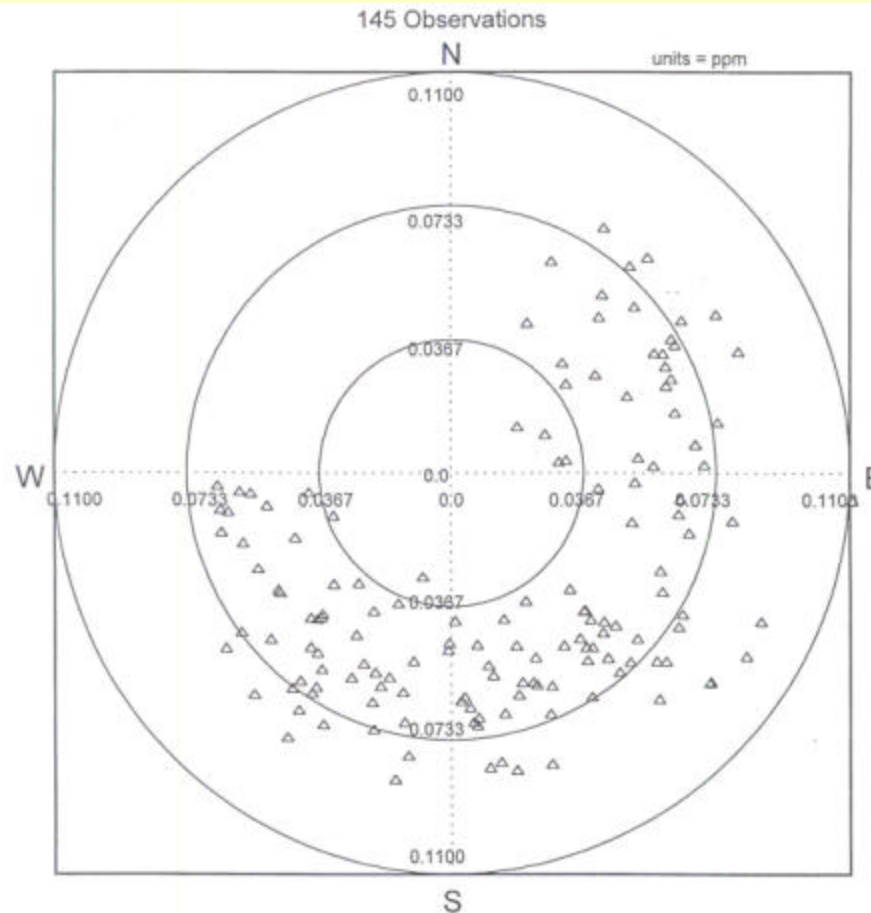


County Work Force Distribution



Meteorology

(Surface Wind at St. Phillips Monitor 1998)



Data from: poseyoz3.98.aq.daily.a0.a1 and poseywd3.98.met.daily.a0.a1
Includes data from 5/1/98 to 10/1/98.
No time period excluded.
Includes hours of day from 0 to 23.
No flags excluded.

Preliminary Observations and Key Questions

Evansville MSA & Gibson County

Observations

- St. Phillips monitoring site currently maintains a design value (.087) above the standard.
 - Based on current U.S. EPA insight, this design value would qualify the area for a “marginal” nonattainment classification, with an attainment deadline of 2007.
- There are no other monitored violations of the standard currently within the region. However, monitoring trend data indicate that sites in Vanderburgh and Warrick Counties have violated the standard previously (2000 and 2001 were uniquely mild ozone seasons).

Key Questions

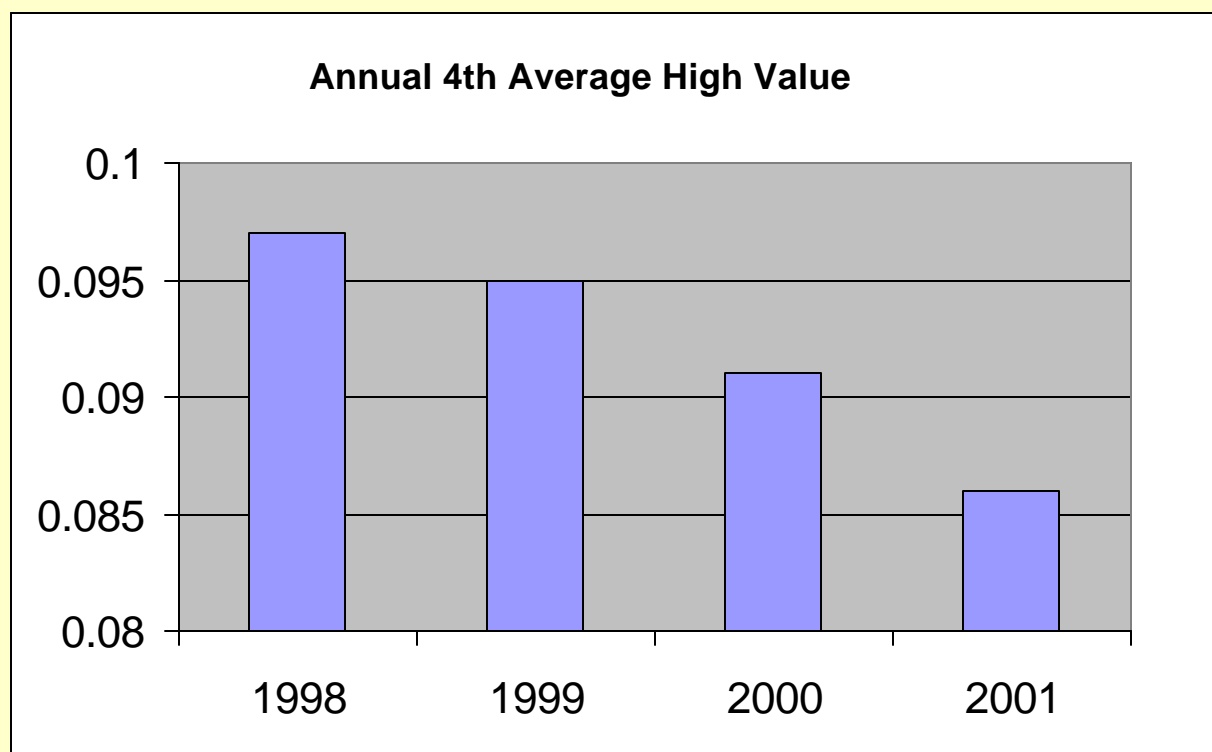
- How will the implementation rule affect the region?
- Should the nonattainment boundaries be larger, smaller, or consistent with the MSA boundaries?

Regional Monitoring Data (2000-2001)

Perry and Spencer Counties

Perry County (AK Steel)

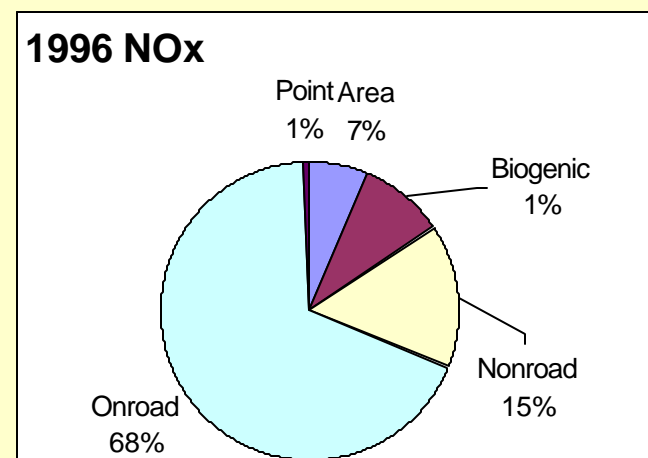
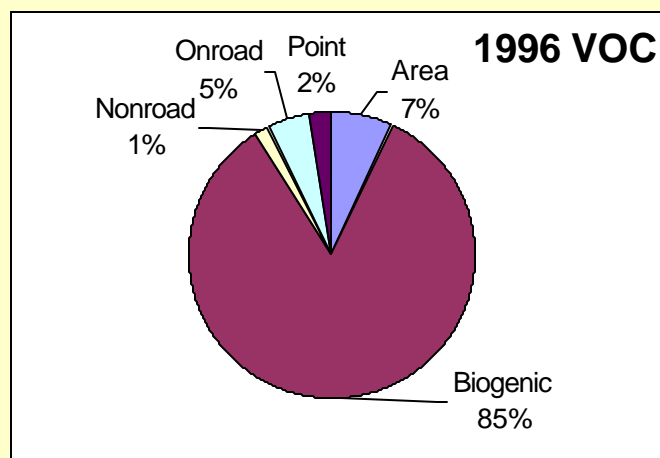
1998	0.097
1999	0.095
2000	0.091
2001	0.086



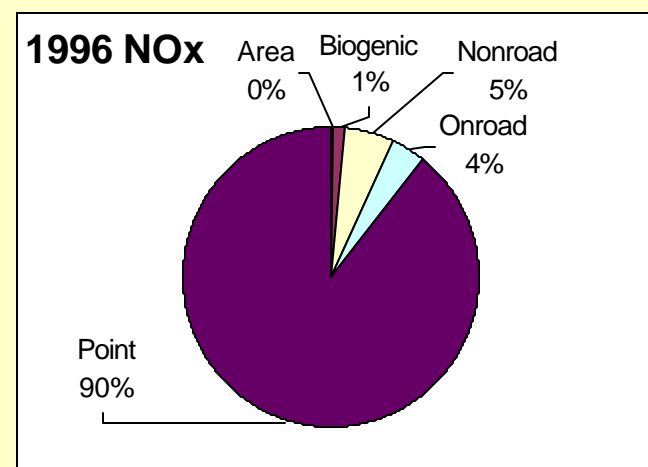
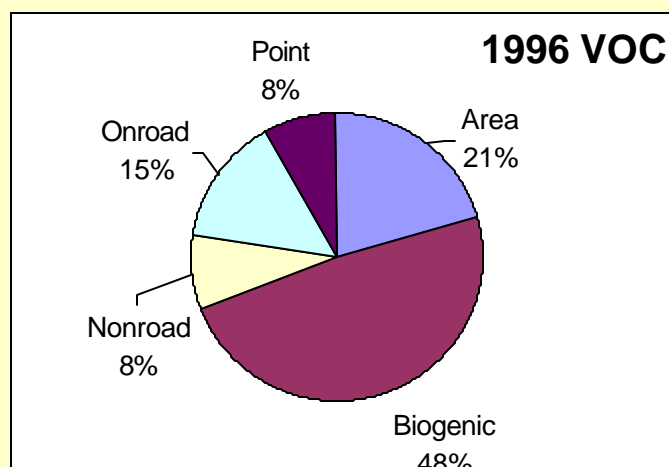
Emissions by Source Category

Spencer and Perry Counties

Perry County

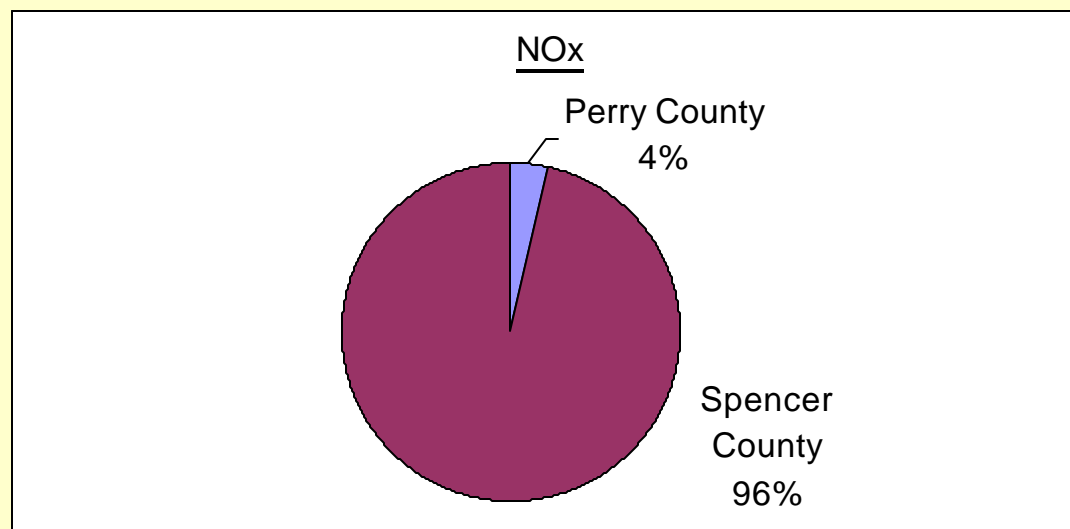
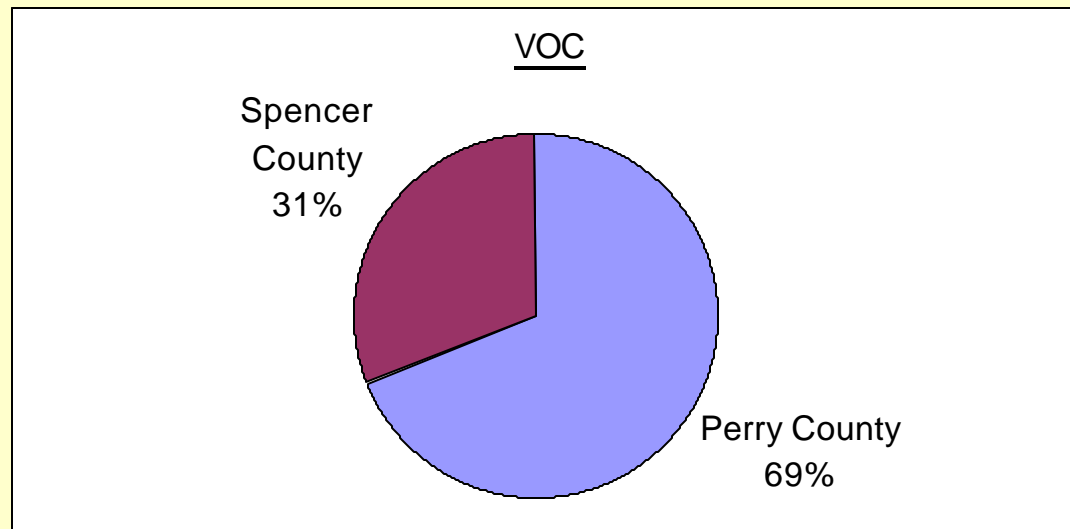


Spencer County



Total Emissions by County

Perry and Spencer Counties



Population Growth

Perry and Spencer Counties

	1990	1997	2000	%Change	2010	%Change	2020	%Change
Perry County	19107	19306	19867	2.91%	20718	4.28%	21224	2.44%
Spencer County	19490	20690	21449	3.67%	22600	5.37%	23286	3.04%

Observations, Key Questions, and Next Steps

Evansville MSA & Gibson County

Observations

- Prior to going out of service in 2001, the monitor site within Perry County maintained a design value above the standard.
- There are no active monitors currently within Perry or Spencer Counties.

Key Questions

- Will U.S. EPA consider monitoring data prior to the three most recent years?
- How will the implementation rule affect the region?
 - Rural Transport?

Next Steps

- U.S. EPA to release draft Implementation Rule by April 2003
- IDEM accepting comment concerning nonattainment designations through May 2003
- Recommendations to be sent to Regional Administrator by July 15, 2003
- Final Implementation Rule complete by November 2003
- Designations final by April 2004

Contact Information

Website:

<http://www.in.gov/idem/air/8hourstandard/index.html>

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